

## REMARKS

This is a preliminary amendment with request for continued examination (RCE) filed in response to the final Office Action dated January 12, 2009.

### I. SUPPORT FOR THE CLAIM CHANGES

Claim 20 covers glass compositions that are or are close to the glass compositions of the fourth embodiment described in paragraphs [0058] and [0059] of the applicants' published patent application. Examples 10 to 14 in Table III on page 26 of applicants' originally filed specification correspond to these glass compositions.

Claim 20 has been amended to further distinguish the claimed optical element from those of Sato by limiting the amounts of the various alkali metal oxides in the glass claimed by claim 20.

First, the upper limit for the amount of Li<sub>2</sub>O in the glass composition of claim 20 was reduced from 10 wt. % to 1.5 wt. %. The basis for this change appears in paragraph [0059] of the published application and in the last line of page 21 of applicants' originally filed specification.

Next the upper limits for the amounts of Na<sub>2</sub>O and K<sub>2</sub>O in the glass composition of claim 20 were reduced from 10 wt. % to 8 wt. %. Paragraph [0058] of the published patent application supports this limitation.

Amended claim 20 unlike claims 17 to 19 still defines the glass composition with open-ended “comprising” wording.

New claim 28 contains the same features and limitations as the amended claim 20, but includes CaO as an additional ingredient with an amount range of 17.8 wt. % to 30 wt. %. The amount range for CaO in claim 28 is supported by the amount range of 20 to 30 wt. % for CaO for glasses of the fourth embodiment in paragraph [0058] of the applicants’ published patent application. The change of the lower limit for the amount of CaO from “20 wt. %” to “17.8 wt. %” is supported by the disclosure of example 11 in Table III and the policy regarding changes in range limitations according to M.P.E.P. 2163.05 III and the *In re Wertheim* judicial opinion.

Thus claim 28 is fully supported by the disclosures in applicants’ specification. It is respectfully submitted that the new claim 28 should not be rejected under 35 U.S.C. 112.

In addition, withdrawn dependent read-and-write-device claim 26 has been amended so that the glass composition in claim 26 corresponds to the glass composition of allowable claim 19.

## **II. OBVIOUSNESS REJECTION OF CLAIMS 1 TO 3 AND 16**

Claims 1 to 3 and 16 were rejected as obvious under 35 U.S.C. 103 (a) over Shizuo, et al, German Patent 3130715.

Claims 1 to 3 and 16 were rejected as obvious under 35 U.S.C. 103 (a) over Matsumaru, et al, Japanese Patent Publication 61-163138.

Claims 1 to 3 and 16 were rejected as obvious under 35 U.S.C. 103 (a) over Ishibashi, et al, US 4,118,238.

Claims 1 to 3 and 16 were rejected as obvious under 35 U.S.C. 103 (a) over Ishibashi, et al, US 4,166,746.

Claims 1 to 3 and 16 were rejected as obvious under 35 U.S.C. 103 (a) over Inoue, et al, US 4,226,627.

**Claims 1 to 3 and 16 have been canceled, obviating the aforesaid obviousness rejections under 35 U.S.C. 103 (a).**

### **III. OBVIOUSNESS REJECTION OF CLAIM 20**

Claim 20 was rejected as obvious under 35 U.S.C. 103 (a) over Sato, US Patent 6,413,894.

Claim 20 has been amended to further distinguish applicants' claimed glass from Sato. In the glass compositions of Sato  $\text{Li}_2\text{O}$  is a major required ingredient that is included in the glass compositions in amounts of from 5 to 11 wt. % according to the claims of Sato, especially claim 1. Also see column 3, lines 35 to 65, especially line 45.

Furthermore Sato states that an object of their invention is to provide an optical glass with good properties for optical applications that is easily and conveniently precise-pressed to form an optical component or element (column 3, lines 13 to 17, of US '894 (Sato)). Sato also explains that this sort of optical glass has a low sag temperature  $T_s$  (column 1, lines 51 to 62) to avoid damage to the precise pressing mold among other reasons.

However Sato states that  $\text{Li}_2\text{O}$  is important for obtaining a low sag temperature at column 6, lines 38 to 41, of US '894. Thus Sato leads one skilled in the art away from use of amounts of  $\text{Li}_2\text{O}$  that are lower than 5 wt. %.

In contrast, the glass composition of applicants' claim 20 is limited to only 1.5 wt. % of  $\text{Li}_2\text{O}$  or less.

Accordingly all the concentration ranges for the oxide ingredients of the glass composition covered by claim 20 no longer overlap, touch or are even close to the glass compositions of Sato, primarily because the upper limit for the amount of  $\text{Li}_2\text{O}$  in the applicants' glass composition is below and well separated from the lower limit of 5 wt. % for  $\text{Li}_2\text{O}$  in the glass composition of Sato.

In addition many of applicants' concentration ranges in claim 20 are more limited in size than those of Sato or cover comparatively lower although overlapping amounts, such as the concentration range for  $\text{Nb}_2\text{O}_5$  and  $\text{TiO}_2$ , so that applicants' claimed glass compositions cover somewhat different species than those of Sato.

For the aforesaid reasons a case of *prima facie* obviousness of claim 20 is no longer established under M.P.E.P. 2144.05 by the disclosures of Sato for the reasons set forth on page 6 of the final Office Action. All the concentration ranges of amended claim 20 are no longer overlapping or even close to those of Sato. The concentration range for  $\text{Li}_2\text{O}$  in the amended claim 20 no longer overlaps that range for  $\text{Li}_2\text{O}$  of Sato.

In addition, Sato explains that it is important to include Li<sub>2</sub>O to have the desired properties for processing their glass compositions by precise pressing to form optical elements. Thus the differences in the amounts of Li<sub>2</sub>O are significant.

For the aforesaid reasons and because of the changes in the amended claim 20 withdrawal of the rejection of claim 20 as obvious under 35 U.S.C. 103 (a) over Sato, US Patent 6,413,894, is respectfully requested.

#### **IV. NEW CLAIM 28**

New claim 28 was added to provide a claim that covers glass compositions that are closer to the glass compositions of the fourth embodiments disclosed in paragraph [0058] than those of claim 20.

The CaO ingredient of the glass of paragraph [0058] was omitted from the amended claim 20 but has been included in the new claim 28 with an amount range of 17.8 wt. % to 30 wt. %. The support for this concentration range is explained in section I herein above, but it is close to the range of 20 wt. % to 30 wt. % in paragraph [0058] of applicants' published patent applications.

This CaO concentration range also helps to distinguish the applicants' glass compositions from those of Sato because Sato discloses a range for CaO of 5 to 27 wt. %, which includes amounts of CaO that are considerably less than those of the applicants' claimed glass of new claim 28. Also the applicants' range is narrower. A species of a disclosed broadly claimed generic glass composition is not necessarily obvious from the disclosed generic glass composition.

In addition, Sato leads one skilled in the glass arts away from a glass composition, which is free of Li<sub>2</sub>O or which has only a very small amount of Li<sub>2</sub>O of 1.5 wt. % or less, because Sato requires 5 wt. % or more of Li<sub>2</sub>O in their glass compositions to provide the desired precise-pressing properties. A prior art references that leads one skilled in the art away from the invention or contains teaching of doing the opposite from a claimed invention should not be used to reject the claimed invention under 35 U.S.C. 103 (a). See M.P.E.P. 2145. X and also the Federal Circuit Court of Appeals has said:

“That the inventor achieved the claimed invention by doing what those skilled in the art suggested should not be done is a fact strongly probative of nonobviousness.” in *Kloster Speedsteel AB v. Crucible Inc.*, 230 U.S.P.Q. 81 (Fed. Cir. 1986), on rehearing, 231 U.S.P.Q. 160 (Fed. Cir. 1986).

For the aforesaid reasons it is respectfully submitted that new claim 28 should **not** be rejected as obvious under 35 U.S.C. 103 (a) over Sato, US Patent 6,413,894.

## **V. WITHDRAWN READ-AND-WRITE DEVICE CLAIMS**

The doctrine of rejoinder under M.P.E.P. 821.04 (a) states that when restriction was required between independent or distinct products and claims for the elected invention are found to be allowable, all withdrawn claims that are limited to the allowable subject matter should be rejoined and also allowed.

It should be pointed out that amended claims 24, 25, and 26 for a read-and-write device are now limited to the glass compositions of the allowed optical element claims 17, 18, and 19.

Thus an indication of allowable subject matter in claims 24, 25, and 26 is respectfully requested in response to this amendment, provided that these claims are amended by including the limitations of claim 6 so that they are independent claims.

However claims 24, 25, and 26 have been not been amended so that they are independent claims at this stage of the prosecution to retain some additional flexibility.

Should the Examiner require or consider it advisable that the specification, claims and/or drawing be further amended or corrected in formal respects to put this case in condition for final allowance, then it is requested that such amendments or corrections be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing the case to allowance, he or she is invited to telephone the undersigned at 1-631-549-4700.

In view of the foregoing, favorable allowance is respectfully solicited.

Respectfully submitted,



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